AMSAT News Service Weekly Bulletins
Issue: ANS-194
Date: 1997-07-13
Sources: amsat-ans-1997-ans-194-weekly.txt

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SB SAT @ AMSAT $ANS-194.01
QUESTIONABLE COMMUNICATION(S)

HR AMSAT NEWS SERVICE BULLETIN 194.01 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.01

For some months, complaints have been received from KO-23 and KO-25 users that communications many felt were inappropriate to be carried over Amateur Radio, have been taking place on those satellites. Reports stated that the offending traffic was taking place between a station located in Brazil and another at a Brazilian scientific research base in Antarctica.

AMSAT-NA officials have been concerned about this issue for some time and have been monitoring the situation. However, they did not feel it appropriate for them to become directly involved, as the satellites in question are licensed in Korea and the communication was between stations licensed by Brazil.

It has now been learned that the communications in question have ceased. Resolution of the situation was apparently brought about through agreements reached between the Brazilian users of the satellites and the Korean command station.

Although AMSAT-NA officers did not believe it appropriate to directly intervene, they are, nevertheless happy that the situation has apparently been resolved satisfactorily.

[ANS thanks AMSAT-NA President, Bill Tynan, W3XO, for this bulletin.]

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SB SAT @ AMSAT $ANS-194.02
KB5UAC GRATEFUL FOR HAM RADIO

HR AMSAT NEWS SERVICE BULLETIN 194.02 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.02

In a packet message to Dave Larsen, N6CO, of the MIREX support team, US astronaut Mike Foale, KB5UAC, expressed the gratitude of the MIR crew ''for all the good wishes and interest over the world, in our troubles and tribulations.'' The MIREX support team--Miles Mann, WF1F, and Larsen--has been handling family traffic for Foale via ham radio and attempting to help him with his radio problems (the MIR's transceiver was cutting out on high power because of a circuit overload). Foale singled out for special mention ''the few hams who work tirelessly on our behalf'' to pass personal messages. Foale said that he and his wife were ''extremely grateful to those hams who pass our messages for us.'' After the MIR's collision with a Progress

cargo rocket, Foale said, ''it was impossible to get any personal news of our well-being to our families'' via the official communication channels. ''Ham radio allowed us to fill the gap.''

''We are particularly interested in longer contacts, than simple QSO exchanges,'' Foale said. ''It is good to tell people about our life here on MIR, and our problems, but the lives of hams on Earth are also interesting to us, and I hope more hams will take the time to tell us about their QTH and surroundings also,'' he concluded.

Ham radio has served as a convenient ''chat'' medium between the US space shuttle Columbia and the troubled Russian MIR space station in recent days. Last weekend, shuttle Commander Jim Halsell, KC5RNI, had two short, direct 2-meter contacts with Foale aboard MIR. The first ship-to-ship SAREX/MIREX contact happened Saturday, July 5, during a MIR/Columbia ''conjunction'' over the Indian Ocean. The contact lasted less than a minute. A little while later, with both spacecraft over the Pacific Ocean, another 30-45 second contact took place, according to Will Marchant, KC6ROL, of AMSAT. ''The shuttle crew was pretty excited about their contact,'' he said. But the best QSO was yet to come. On Tuesday, July 8, 1900 UTC, Foale contacted W5RRR, which patched him through NASA's communications circuits to the space shuttle, enabling Foale to speak at length with the Columbia crew. During the ten-minute contact, Foale filled in his fellow astronauts about the situation aboard MIR, where a Progress supply rocket had just successfully been docked.

''We'd like to invite you to visit MIR,'' Foale said to the shuttle crew, which respectfully declined. Foale said the arrival of the Progress was ''almost like Christmas.'' He said his personal items still in the damaged Spektr module had been replaced, along with a videocassette player. Foale told Halsell the MIR crew enjoys watching American movies when they have the time. He also told his fellow astronauts aboard the Columbia that he had not had a chance to see any of the pictures from the Mars Pathfinder mission as yet. Foale said the Progress carried tea, coffee, chocolate and even fresh food.

Other Columbia-MIR conjunctions will be possible through the mission but whether another contact is attempted depends on the Columbia and MIR work schedules.

On July 10, Foale told N6CO in another packet message that the crew was ''extremely busy, trying to crawl through all the bags unloaded from Progress.'' Foale said the crew will do a training run on July 15 prior to the space walk to attempt to repair the damage and restore power to the space station. Foale will sit out the space walk in the Soyuz vehicle.

[ANS thanks the ARRL, Philip Chien, KC4YER, Pat Kilroy, WD8LAQ, Frank H. Bauer, KA3HDO, Dave Larsen, N6CO, Matt Bordelon, KC5BTL, and Rosalie White, WA1STO, for their contributions to this bulletin.]

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SB SAT @ AMSAT $ANS-194.03
HONG KONG ON AO-10

HR AMSAT NEWS SERVICE BULLETIN 194.03 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.03

Terry, G1WPR, a regular contributor to the AMSAT-UK Central England Net,

reported a contact on AO-10 with Charlie, VR2XMT, in Hong Kong. Terry made the contact just after Charlie completed a QSO with a ZS6 station. QSL for VR2XMT is via the bureau or direct to PO. Box 541 Hong Kong.

[ANS thanks John Heath, G7HIA, fir thus story.]

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SB SAT @ AMSAT $ANS-194.04
RS-10 AND 16 UPDATES

HR AMSAT NEWS SERVICE BULLETIN 194.04 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.04

Here's part of a message just received 10th July '97, from
Leonid Labutin, UA3CR, in answer to queries regarding the
status of RS-10 and two parameters of the RS-16 telemetry
They were Channel 'G' "U of transponder V" and Channel 'F' "U o
f stabilizer V".

Leonid Labutin, UA3CR, responded,
"Yesterday I had meeting with Alex Papkov at GCC. We talked about
RS-10 and other problems. He thinks there is 1 - 2% of the
possibility to restore RS-10. It will be clear after coming back
one good expert in GCC from his vacation. Cross fingers....."

"Regarding G and F (of RS-16) TLM, G is Voltage on the
transponder in Volts units, F is Voltage on BCR (14->27 V) in
Volts units. It used only for scientific experimental equipment
installed on the board."

[ANS thanks Leonid Labutin, UA3CR, and Pat Gowen, G3IOR, for this
updated news.]

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SB SAT @ AMSAT $ANS-194.05
WEEKLY SATELLITE REPORT PT 1

HR AMSAT NEWS SERVICE BULLETIN 194.05 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.05

MIR:
Mike Foale, KB5UAC, has been active on amateur radio.. The radio has
served as a valuable link between Mike and his family and friends during
this crisis . Also activity from the MIR packet station has been reported.
Frequencies with activity have been 145.985 MHz and the 145.200/800 MHz
split.

SAFEX, MIR 70 cm Repeater
(Uplink 435.750 MHz FM, Downlink 437.950 MHz FM,
Subaudible tone 141.3 Hz)
Not operational at this time..

RS-10
(Uplink 145.865-145.905 MHz CW/SSB, Downlink 29.36-29.4 MHz CW/SSB)
RS-10 Still silent.

RS-12

(Uplink 21.21-21.25 MHz CW/SSB, Downlink 29.41-29.45 MHz or
145.91-145.95 MHz CW/SSB)
Operational.
If the activity on RS-12/13 the weekend of 28/29 June, the US-Canadian Amateur Field Day, was indicative of activity on all satellites, it is surprising that all space station receivers aren't still de-sensed. This bird remains active and continues to provide good signals into eastern North America. The passes will remain somewhat inconvenient through July for those of us with day jobs, occurring in the late morning and the very late evening as they do. August will result in more convenient times during the weekdays."
[ANS thanks Dick Montgomery, N3DV, for this update.]

RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Operational.
WT0N reports that downlink signals are still weak from RS-15, but the bird is still workable.
(Hint: If SSB doesn't work for you, try CW. CW is very easy to hear on the downlink!)

RS-16
RS-16's 435.504 MHz beacon is active. Also, the 29.408 MHz beacon is reported as being heard.
No transponder activity yet.
RS-16 CW Telemetry.
P PSU voltage Volts..... x0.1
O Solar panel voltage Volts..... x0.1
N Solar panel current mA
M TX 29 MHz Output Power mW..... x10
L TX 29 MHz current mA
K TX 29 MHz voltage 7V nominal
J TX 435 MHz Output Power mW..... x10
I TX 435 MHz current mA
H TX 435 MHz voltage V..... x0.1
G U of the transponder V..... x0.1
F U of stabilizer V..... x0.1
E Temperature of the charger in C deg.
D Temperature TX 29 MHz in C deg.
C Temperature TX 435 MHz in C deg.
B Temperature RX 145 MHz in C deg.
A Temperature of the stabilizer in C deg.
Parameters M, L, J, I are valid in FM mode only!

Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink = 29.415 - 29.448 MHz
Beacons = 29.408 , 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W

Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz
Pwr 435 MHz Beacons = 1.6 W

FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Operational. FO-20 in mode JA continuously.
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]

KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM, 9600 Baud FSK.)
KO-23 operating normally.

KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM,
9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for his reports on
KO-25 and KO-23.]

AO-27
(Uplink 145.85 MHz FM, Downlink:
 436.792 MHz FM (As of April 1, 1997)
Operating normally.
This information can be found at www.umbra.com
AO-27 TEPR (Timed Eclipse Power Regulation) States are as follows
 As of July 6, 1997

TEPR STATE	Time	TX Status
1	n/a	OFF
2	n/a	OFF
3	---	OFF
4	21	OFF
5	17	ON at Med Power
6	---	OFF

The TEPR States are defined as follows:

  Tepr 1, Started when the satellite Enters the Eclipse
  Tepr 2, Started at (tepr 1 time) after the satellite enters the eclipse
  Tepr 3, Started at (tepr 1 time) + (tepr 2 time) ...

  Tepr 4, Started when the satellite enters the Sun
  Tepr 5, Started at (tepr 4 time) after the satellite enters the Sun
  Tepr 6, Started at (tepr 4) + (tepr 5) ...

You should note that TEPR states 1,2 and 3 happen during the Night Time
passes and TEPR states 4,5 and 6 happen during the Day time passes. These
occur during EVERY pass, not just over the U.S.A.

The times assigned to the TEPR states are chosen for the health of the
satellite over operation convenience. Therefore, during parts of the year
the satellite will turn on late or turn off early as seen by ground
stations.

Users are reminded that as an FM-mode repeater, AO-27 is subject to
FM "capture effect" and can only transmit one signal at a time. Users
are asked to cooperate, keep calls short, give breaks so as many
stations as possible can work a pass, and above all, listen before
and while transmitting. The satellite has a very sensitive receiver,
and stations running approximately 25 watts power to moderate-gain
omnidirectional antenna can get a good uplink signal into the
satellite. A sensitive UHF FM receiver with a preamplifier and
an omnidirectional antenna can receive AO-27's downlink with some
fading; moderate-gain directional arrays should provide a solid
receive signal. Remember to correct for the +/- 9 KHz of Doppler
shift on the 436 MHz downlink signal during a pass.
No Doppler correction is needed for the 145.850 MHz uplink signal.

Users are asked not to transmit on 145.85 MHz if they do not hear the
satellite's downlink so as to avoid possible interference to other
satellite uplinks and downlinks on adjacent frequencies.
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update.]

FO-29

Voice/CW Mode JA
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital Mode JD
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600 baud
BPSK)
Operational.
The latest FO-29 Schedule.
July 11 (Fri) 09:51z JD1200
July 18 (Fri) 00:20z JD9600
July 25 (Fri) 09:23z JA
Aug 1 (Fri) 08:17z JD1200
Aug 8 (Fri) 00:30z JD9600
Aug 15 (Fri) 01:08z JA
Aug 22 (Fri) 08:26z JD1200
Aug 29 (Fri) 00:40z JD9600
Sept 5 (Fri) 01:18z JA
Sept 12 (Fri) 00:13z JD1200
Sept 19 (Fri) 00:51z JD9600
Sept 26 (Fri) 08:09z JA
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]

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SB SAT @ AMSAT $ANS-194.06
WEEKLY SATELLITE REPORT PT 2

HR AMSAT NEWS SERVICE BULLETIN 194.06 FROM AMSAT HQ
SILVER SPRING, MD, JULY 13, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-194.06

AO-10
 (Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz
CW/USB)
Operational.
AO-10 was at 39,767 plus kilometers on July 13th
when BJ Arts, WT0N, had a very good QSO with Chris,
N0JCF. Strong downlink signals from the bird, 5-5 to 5-9, with some QSB. No
FM'ing heard. It sure is nice to have the bird back and running nicely. It
was a pleasure to have such a nice QSO again and not have to use every
filter I have to pull the downlink out of the noise.
[ANS thanks BJ Arts, WT0N, for this report.]

OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz..)
Operating normally.
The beacon on 2401.500 heard over Spain on 23rd of June and also on
24th, but with weak signals.
[ANS thanks Saludos de Antonio, EA1IW/EA4, for this report.]

The operating schedule is unchanged.
        ASCII status (210 seconds)
        ASCII bulletin (60 seconds)
        BINARY SEU (30 seconds)
        ASCII TLM (90 seconds)
        ASCII WOD (120 seconds)
        ASCII bulletin (60 seconds)
        BINARY ENG (30 seconds)

[ANS thanks Clive Wallis, G3CWV, for this information.]

AMSAT-OSCAR-16 (PACSAT)
(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
 Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.

Beacon 2401.1428 MHz.)
Operational.
State of the batteries at the end of a nocturnal orbit.
uptime is 1027/17:34:14. Time is Fri Jul 11 22:59:24 1997
Bat 1 V=1.267V Bat 2 V=1.309V Bat 3 V=1.295V Bat 4 V=1.296V
Bat 5 V=1.276V Bat 6 V=1.265V Bat 7 V=1.303V Bat 8 V=1.296V

State of the batteries changing to light zone in the same orbit
Bat 1 V=1.400V Bat 2 V=1.421V Bat 3 V=1.337V Bat 4 V=1.342V
Bat 5 V=1.382V Bat 6 V=1.379V Bat 7 V=1.403V Bat 8 V=1.372V
Total Array C= 0.221 Bat Ch Cur=-0.030 Ifb= 0.025 I+10V= 0.295
TX:010B BCR:77 PWRC:59E BT:3C WC:25 EDAC:9E

Graphic information about WOD/Telemetry values can be found at:
http://www.arrakis.es/~ea1bcu/wod.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report.]

DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK.
Beacon 2401.220 MHz.)
No report available.

WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25.)
No report available.

LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks:
145.84, 145.86, 145.88, 145.9 MHz FM, Downlink 437.125 MHz SSB,
1200 bps RC-BPSK.)
Operational.
State of the batteries at the end of a nocturnal orbit.
uptime is 752/07:31:07. Time is Fri Jul 11 21:36:17 1997
Bat 1 V=1.306V Bat 2 V=1.298V Bat 3 V=1.313V Bat 4 V=1.305V
Bat 5 V=1.312V Bat 6 V=1.284V Bat 7 V=1.309V Bat 8 V=1.297V
State of the batteries changing to light zone in the same orbit
Bat 1 V=1.395V Bat 2 V=1.398V Bat 3 V=1.415V Bat 4 V=1.392V
Bat 5 V=1.423V Bat 6 V=1.496V Bat 7 V=1.402V Bat 8 V=1.394V
Total Array C= 0.459 Bat Ch Cur= 0.210 Ifb= 0.002 I+10V= 0.118
TX:016 BCR:7F PWRC:36E BT:3C WC: 0

Add 6.83 minutes to the clock of the satellite
Graphic and general information about Telemetry values can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report.]

UO-22:
(Uplink: 145.9 or 145.975 MHz FM. Downlink 435.120 MHz FM
9600 Baud FSK.)
UO-22 is operating normally. The Earth Imaging System (EIS) is being
scheduled to take images 2 or 3 times per week.
[ANS thanks Chris Jackson, G7UPN / ZL2TPO,
Groundstation and Operations Manager, for this report.]

IO-26 (ITAMSAT)
(Uplink 145.875, 145.9, 145.925, 145.95 MHz FM, Downlink 435.822 MHz SSB,
1200 Baud PSK.)
The satellite is in good shape.
Daniele Piercarlo, IK2XRO, will try to reload the BBS soon.
[ANS thanks Daniele Piercarlo, IK2XRO, ITMSAT Command Station for this
report.]

[Please send your Satellite or News reports to ANS Editor B.J. Arts, WT0N,
via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]

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